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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,024	04/20/2004	Aaron Ferrucci	ALTRP112/A1251	5974

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EXAMINER

KERVEROS, JAMES C

ART UNIT	PAPER NUMBER
2138	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/829,024

Applicant(s)

FERRUCCI ET AL.

Examiner

JAMES C. KERVEROS

Art Unit

2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a Non-Final Action in response to Amendment filed 8/11/2006.

Claim 15 is cancelled.

Claims 1-14 and 16-30 are presently under examination and pending.

Response to Arguments

Applicant's arguments with respect to claims 1-14 and 16-30 have been considered but are moot in view of the new grounds of rejection under 35 U.S.C. 102(b) as being anticipated by Meizlik et al. (US Patent No. 6,112,323), and under 35 U.S.C. 103(a) as being unpatentable over Meizlik et al. (US Patent No. 6,112,323) in view of Malek (U.S. Patent No. 5,086,467), as set forth in the present Office Action, below. Therefore, the rejection in the prior Office Action has been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-12, 21-24 and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Meizlik et al. (US Patent No. 6,112,323), issued: August 29, 2000.

Regarding independent **Claims 1, 28**, Meizlik discloses a method and apparatus for efficiently and reliably sending small data messages from a sending system to a large number of receiving systems, Figures 2 and 4, comprising:

Receiving a request (ACK requested flag) at a secondary component (recipient) coupled to a primary component (sender) through a (network 112), during the positive reliability transmission mode, where the ACK requested flag is set once every Nth packet along with a collection of N packets referred to as "ACK window" or "transmission window." Setting the ACK request flag signals the recipient to positively acknowledge receipt of that packet by sending an ACK to the sender, see Summary of the Invention.

Determining a pseudo-random delay prior to responding to the request, and pseudo-randomly delaying a response to the request, using a NAK wait timer (152, Figure 8) when a non-sequential packet is detected and for transmitting a NAK to sending system 144 when the appropriate NAK timer has expired. In its most basic form, the NAK suppressor comprises a NAK wait timer that is set to a random value when a packet is received out of numerical order. Setting the timer to a random value randomizes the probability of transmitting a NAK and distributes the number of NAKs transmitted over a longer time period.

Regarding independent **Claim 21**, Meizlik discloses the same limitations as described with respect to claim 1 above. Additionally Meizlik discloses arbitration logic, such as a message handler 160 Figure 8, indicating that the message has been completely received and should be transmitted to the appropriate application.

Regarding Claims 2, 3, 5, 6, 9-12, 22-24, 26, 27, 29 and 30, Meizlik discloses a negative acknowledgment wait time including generating a pseudo-random number between a specified random number minimum value and a specified random number maximum value; multiplying the pseudo-random number by a bias curve in order to generate an unscaled wait time with a probability density function that is dependent on the bias curve; and scaling the unscaled wait time to create a scaled wait time by multiplying the unscaled wait time by a scale factor, as recited in the claim by Meizlik.

Regarding Claims 7, 8, Meizlik discloses connectionless protocols, such as UDP over an IP network, which typically rely on a broadcast or "multicast" model where a single message is broadcast to a multiple receiving systems without forming a connection with the individual systems. This approach eliminates the overhead associated with forming connections with each system, but suffers from the inability to guarantee receipt of messages to all systems. For IP networks, multicast is unreliable by design in order to reduce overhead of sending packets to multiple destinations, see Prior State of the Art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meizlik et al. (US Patent No. 6,112,323).

Regarding independent **Claim 13**, Meizlik discloses and an apparatus for efficiently and reliably sending small data messages from a sending system to a secondary component (receiving system, 138, Figure 8), the receiving system, comprising:

A delay mechanism (NAK wait timer 152, Figure 8) configured to determine values operable to delay responses to requests (ACK requested flag) received through the network 112 by using the NAK wait timer (152, Figure 8) when a non-sequential packet is detected for transmitting a NAK to sending system 144 when the appropriate NAK timer has expired. In its most basic form, the NAK suppressor comprises a NAK wait timer that is set to a random value when a packet is received out of numerical order. Setting the timer to a random value randomizes the probability of transmitting a NAK and distributes the number of NAKs transmitted over a longer time period.

Meizlik does not explicitly disclose, "an interface coupled to an interconnection module for communicating with a primary component through the interconnection module".

However, Meizlik discloses a serial port interface 46 connected to a modem 54, which may be internal or external to a personal computer 20 corresponding to a sending system, which establishes communications over the wide area network 52, such as the Internet, with a remote computer 49 corresponding to a receiving system, using logical

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connections. The remote computer 49 may be another personal computer, a server, a router, a network PC, a peer device or other common network node, as illustrated in Figure 1. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the interface network configuration of Figure 1 as taught by Meizlik, in the receiving system, 138, Figure 8 of Meizlik, since modems are routinely available for establishing communications over network environments, which are commonplace in offices' enterprise-wide computer networks, intranets and the Internet.

Regarding Claims 14, 17-20, Meizlik discloses a negative acknowledgment wait time including generating a pseudo-random number between a specified random number minimum value and a specified random number maximum value; multiplying the pseudo-random number by a bias curve in order to generate an unscaled wait time with a probability density function that is dependent on the bias curve; and scaling the unscaled wait time to create a scaled wait time by multiplying the unscaled wait time by a scale factor, as recited in the claim by Meizlik.

Claims 4, 16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meizlik et al. (US Patent No. 6,112,323) in view of Malek (U.S. Patent No. 5,086,467).

Regarding Claims 4, 16, 25, Meizlik does not explicitly disclose a Linear Feed Back Shift register (LFSR) as delay mechanism.

However, in analogous art, Malek (US 5,086,467) discloses a secure communication system including a pseudo-random sequence itself, which is ideally suited for determining both the duration and the inter-transmission delays by using the output of the LFSR to seed random variable generators, one of which may be used to select the duration of any dummy traffic transmission, and the other of which may be used to determine the inter-transmission delay, or time between transmissions, (see Malek, Summary of the Invention and Figure 3). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Meizlik as taught by Malek, by incorporating an LFSR in the NAK wait timer located in the receiver of Meizlik, for the purpose of generating a pseudo-random delay, since an LFSR is ideally suited for determining time delays. A person skilled in the art would have been motivated to use an LFSR, since according to Meizlik the detecting of a non-sequential packet number, as well as starting the NAK wait timer may be incorporated into the receiver, based on a variety of design choices that need to be made for any particular implementation, such as using an LFSR to achieve the desired time delay.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES C. KERVEROS whose telephone number is (571) 272-3824. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

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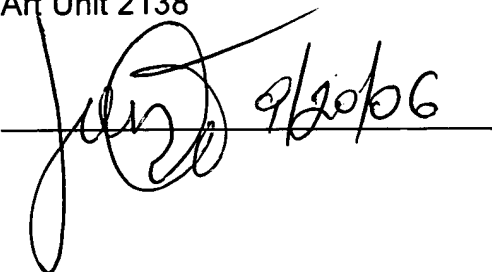
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Date: 20 September 2006
Office Action: Non-Final Rejection

JAMES C KERVEROS
Examiner
Art Unit 2138

A handwritten signature in black ink, appearing to read 'James C. Kerveros', is written over a horizontal line. To the right of the signature, the date '9/20/06' is handwritten.